YELLOW-BREASTED CHAT (*Icteria virens*)

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Criteria Scores

Population Trend	Range Trend	Population Size	Range Size	Endemism	Population Concentration	Threats
10	10	5	5	0	0	10

Special Concern Priority

Currently considered a Bird Species of Special Concern (breeding), Priority 3. Included on CDFG's (1992) unprioritized list and listed as Priority 2 on the original prioritized list (Remsen 1978).

Breeding Bird Survey Statistics for California

1966-1999					1966-1979			1980-1999			
Trend	*P*	*n*	(95% CI)	R.A.	Trend	*P*	*n*	Trend	*P*	*n*	**Credibility**
0.9	0.35	53	-1.0, 2.9	0.72	4.7	0.18	26	0.2	0.87	48	**med**

Breeding Bird Survey (BBS) data for the yellow-breasted chat from 1966 – 1999 show a nonsignificant increasing trend. Note that these data exhibit several deficiencies, including low abundance (less that 1.0 birds/route) and possible inconsistency in trend over time. BBS data should therefore be interpreted with caution.

General Range and Abundance

Two subspecies restricted to the New World: *I. v. auricollis* of western North America, *I. v. virens* of eastern North America. *I. v. auricollis* breeds from southern British Columbia east to southern Saskatchewan and North Dakota (Minot), south to south-central Baja California, western Texas, and (at least formerly) southern Tamaulipas; winters from southern Baja California and south Texas south to western Mexico through central Guatemala (AOU 1957; Eckerle and Thompson 2001). This subspecies is generally patchily distributed throughout its breeding range with highest

concentrations in the Klamath region of California and Oregon, southern Nevada, southeastern Arizona, southwestern Texas and western North Dakota/eastern Montana (Sauer et al. 2000).

Seasonal Status in California

Occurs primarily as a migrant and summer resident from early-April (in southern California) to late September with some stragglers lingering into October (Garrett and Dunn 1981); breeding season extends from early May through early August.

Historical Range and Abundance in California

Grinnell and Miller (1944) described the yellow-breasted chat as a "fairly common to common" summer resident, breeding the length and breadth of the state excluding the higher mountains (to about 5,000 ft (1520 m) elevation) and islands; more numerous towards the interior. The chat was a "common summer resident" in coastal southern California (Willett 1912), and recorded in the interior valleys and various desert riparian areas throughout the Mojave and Colorado deserts (e.g. Yermo, Murray Canyon near Palm Springs, Big Morongo Valley, Mecca, Niland) (CNDDB 2001; MVZ). Grinnell (1914) described it as one of the five most common breeders along the lower Colorado River. Along the central coast, chats occurred from Ventura County (Santa Clara River at Piru) north to San Lorenzo, Santa Cruz County. Pemberton and Carriger (1915 in Roberson 1993) considered it a "fairly common" bird of willow (*Salix* spp.) thickets along the San Antonio River, Monterey County. Grinnell and Wythe (1927) noted the chat was a "fairly common summer visitant to the warm interior valleys" to the Bay/Delta region; many records exist for Santa Clara, Alameda, Contra Costa and Solano Counties (Grinnell and Miller 1944, CNDDB 2001, MVZ). Chats were found along the north coast from Requa, Del Norte County south to at least Santa Rosa, Sonoma County and Clear Lake, Lake County (Grinnell and Miller 1944; MVZ) but were considered rare in any season in Marin County (Shuford 1993). In the Central Valley and Sierra foothills, Gaines (1974) found singing male chats to be common along the upper Sacramento River (Colusa County) and uncommon on the Feather River from Oroville to Verona. Numerous records

exist for Trinity and Shasta Counties and range south to Rumsey and Knight's Landing, Yolo County and Sacramento, east to Nevada City, Nevada County and Dutch Flat, Placer County (Grinnell and Miller 1944, CNDDB, MVZ). In the San Joaquin Valley and foothills, chats were found along the Tuolumne River near Modesto, Stanislaus County south through Kern County (e.g. Weldon, Lake Isabella, and Ft. Tejon) (Grinnell and Miller 1944, CNDDB, MVZ). Northeastern California produced numerous records for chats in Modoc, Lassen and Siskiyou Counties (Grinnell and Miller 1944, MVZ). East of the Sierran escarpment, chats were known from riparian systems in the Owens and Death Valleys, (e.g. Olancha, Lone Pine, Shoshone, Independence and Ash Creek) as well as Mono Lake (CNDDB; Grinnell and Miller 1944, MVZ).

Recent Range and Abundance in California

There are little quantitative data available on the population status of the yellow-breasted chat in California. While overall still widely distributed, the species is now rare or absent from areas formerly supporting breeding populations (e.g. parts of southern and central California, San Joaquin and lower Sacramento Valleys, Modoc Plateau). The current breeding range is estimated to be about 35% reduced from its historic extent. Chat populations may be increasing in the northern third of the state and rebuilding along the Colorado River but these gains are offset by declines elsewhere; nowhere is the population large. Rosenberg et al. (1991) estimated the chat population along the lower Colorado River to number about 700 individuals in 1986, representing a decline of 30% since 1976, and attributable to habitat loss due to flooding in the mid-80s. Chats ability to use salt cedar (*Tamarix* spp.) as nesting habitat accounts for recent population rebounds here (S. Laymon pers. obs.). Other desert breeding populations are small and are found at the Mojave River at Victorville (6-10 pairs), Morongo Valley (2-7 pairs), and Cushenberry Springs (1 pair); Afton Canyon and Camp Cady may still have nesting chats (Myers no date). The species is doing comparatively well in San Diego County. Counts of 20 – 50 individuals in a day have been recorded along the Santa Margarita River north of Fallbrook, along the San Luis Rey River between

Interstate 15 and Pala, in the San Pasqual Valley down to Lake Hodges, in the lower Los Penasquitos Canyon, along the Sweetwater River in the Jamacha area and in the Tijuana River valley. It occurs locally along many small creeks as well as main rivers (P. Unitt pers. com.). It is now a rare and localized summer resident in Los Angeles County (Los Angeles County bird atlas data) and in Orange County (Hamilton and Willick 1996) where virtually all chats are found in mature willows along lowland watercourses (Gallagher 1997 in Ricketts et al. 2000). In Santa Barbara County, chats have declined markedly and are now found locally mainly at Barka Slough on Vandenberg Air Force Base, along the Santa Ynez River, and along Mono and Agua Caliente Creeks. The county total breeding population is estimated at 80+ pairs (Lehman 1994). Considered uncommon to locally fairly common in the interior of San Luis Obispo County, breeding is highly likely along the Salinas River, Trout Creek, and Arroyo Grande Creek above Lopez Lake (San Luis Obispo County bird atlas data). The chat is a rare and local summer resident in Monterey County, decidedly on the decline. The current population is fragmented along the Salinas and Carmel River systems, and along the San Antonio River at the San Antonio Lake delta for a county total of about 40 pairs (Roberson 1993). The Bay/Delta region holds only scattered records for chats: 2 pairs in Marin County (Shuford 1993), probable nesting in Contra Costa County on 3 breeding bird atlas blocks (Contra Costa County bird atlas data) and probable nesting in Alameda County at 2 locations (Alameda County bird atlas data). The Sonoma County Bird Atlas project confirmed nesting only at Annadel State Park but chats were also found in 18 other atlas blocks, suggesting breeding along Santa Rosa Creek at Spring Lake, Russian River at Guerneville, Rio Nido, Dry Creek and elsewhere (Parmeter 1995). Little quantitative data are available for the northern third of the state where the species seems to be doing well. Yutzy and Yutzy (Ricketts et al. 2000) reported chats "everywhere" in Shasta and Siskiyou Counties. In the Klamath Region, singing chats were recorded at all point count stations in a survey of gravel bars on the lower Eel River, Humboldt County (LBJ Enterprises 1999 in Ricketts et al. 2000). Further, recent work on the Humboldt

County Breeding Bird Atlas confirmed chats breeding in 11 atlas blocks with probable/possible breeding in 63 additional blocks (a total of 17% of the county). Based on BBS data, northwestern rivers, including the Klamath River, support the highest chat densities in the state (Sauer et al. 2001). In the Central Valley and Sierran foothills, chats persist, especially in the north valley region. During one year of mist netting along Clear Creek in Shasta County, 11 HY and 8 AHY birds were caught, yielding a productivity ratio of 1.37 (Gardali et al 1999 in Ricketts et al. 2000). Other locations with chats include Bidwell Park and Oroville Wildlife Area, Butte County; Stillwater, Glenn County; and Little Stony Creek at East Park Reservoir, Colusa County (where 19 AHY and 7 HY individuals were captured in 1999; 4 nests were found (Holmes et al. 2000 in Ricketts et al. 2000). About 20-30 pairs of chats (in 11 bird atlas blocks) occur in Sacramento County (T. Manolis pers. com). The species is now found in only a few places in the San Joaquin Valley (Small 1994) with records for Stanislaus River at Horseshoe Bend Recreation Area (Stanislaus County) and the Mokelumne River (San Joaquin County (PRBO data 1998 in Ricketts et al. 2000). There are between 50 and 100 pairs nesting at the South Fork Kern River Preserve, Kern County (Myers no date). East of the Sierra escarpment, 13 chats were detected in 1999 at Lower Hogback Creek, Inyo County (Heath and Ballard 1999 in Ricketts et al. 2000). Chats are rare in the White Mountains with an exceptionally high elevational record of 6750 ft (2110 m) at Wyman Creek (MVZ).

Ecological Requirements

Yellow-breasted chats are characterized as preferring early successional riparian habitats with a well-developed shrub layer and an open canopy for nesting (Eckerle and Thompson 2001) but vegetation structure more than age appears to be the important factor in nest site selection. Blackberry (*Rubus* spp.) brambles, wild grape (*Vitis* spp.) and willow are frequently selected as nesting strata as are other plant species that form dense thickets and tangles (Grinnell and Miller 1944). The nest is typically placed within 1 m (3 ft) of the ground (up to 2.44 m) (8 ft) (Ehrlich et

al. 1988). Taller trees (i.e. cottonwood (*Populus* spp.) and alder (*Alnus* spp.)) are required for song perches (Dunn and Garrett 1997). Nesting habitat is usually found along the narrow border of streams, creeks, sloughs and rivers and seldom occupies extensive tracts in any given area; thus, it may always be limited in availability. Hunter et al. (1988 in Ricketts et al. 2000) found chats use the exotic salt cedar (*Tamarix chinensis*) preferentially to native vegetation in the Pecos River, Texas but Brown and Trosset (1989 in Ricketts et al. 2000) report that chats nest in salt cedar and native shrubs in direct proportion to their frequency of occurrence in a given area.

Diet studies for chats are lacking in California. Elsewhere, adults feed predominantly on insects and spiders; wild fruits and berries are also important. Nestlings are fed primarily on soft-bodied insects (orthropterans and larval lepidopterans) (Eckerle and Thompson 2001).

The vocal repertoire of the adult male chat is rich and varied and includes a wide variety of calls and song variations (mean repertoire size: 62 song types). Males may sing throughout the day and evening and will also vocalize at night during the height of the breeding season. Song, occasionally accompanied by flight display, is used to establish and defend individual territories but pairs tend to congregate, suggesting loose coloniality. Outside of the breeding season, yellow-breasted chats are largely silent. This coupled with the species' skulking and secretive behavior makes it difficult to detect when not vocalizing (Eckerle and Thompson 2001).

Threats

Destruction of riparian woodland was implicated in the early decline of the chat in California (Remsen 1978) but the species' absence from seemingly suitable habitat suggests additional population pressures. Yellow-breasted chats are frequent hosts to brown-headed cowbird (*Molothrus ater*) nest parasitism elsewhere in their range (Erlich et al. 1988) but the extent of parasitism pressure in California is unknown. Gaines (1974) supposed the chat's susceptibility to parasitism in the Sacramento Valley was moderate. Chat populations have become quite common

on Camp Pendleton, San Diego County where intensive brown-headed cowbird trapping has been conducted for years (P. Unitt, pers com), suggesting a causal effect.

Chat dependence on understory and shrubby riparian vegetation for nesting makes it vulnerable to habitat loss associated with flood control maintenance involving the removal of vegetation along active river channels as well as urban development and agriculture. The species is sensitive to grazing and may be a good indicator of the effects of grazing on riparian birds (Sedgwick and Knopf 1987). Chats use vocal cues extensively throughout the breeding season therefore high noise levels such as those associated with construction projects using heavy equipment may be of concern.

Management and Research Recommendations

- Preservation of existing riparian habitat and restoration of degraded riparian vegetation will benefit this species.
- Riparian habitat should be managed to maintain and/or promote a dense shrub layer; restoration project proponents should be encouraged to install a shrub layer in the early stages of restoration.
- Chats will nest in salt cedar, Himalaya berry (*Rubus discolor*), Russian olive (*Elaeagnus angustifolia*) and other non-native plant species that provide dense shrub layers. Removal of these plant species from riparian areas should be timed to avoid disturbance to nesting chats and/or should proceed only after careful assessment and mitigation for any detrimental effects to nesting chats and other riparian associates.
- Lack of information on the breeding distribution and population status of the yellow-breasted chat in California hampers efforts to recover the species. Therefore, studies that illuminate the biology and ecology of this species should be undertaken. Areas with healthy breeding populations of chats should be identified and protected.

- Cowbird control projects undertaken at Camp Pendleton and elsewhere for the benefit of the endangered least Bell's vireo (*Vireo bellii pusillus*) may also have had a beneficial effect on the chat. The extent to which cowbird nest parasitism affects the chat should be studied and appropriate management actions taken by resource agencies.
- Managing habitat for the yellow-breasted chat would also benefit the following other riparian associates: song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), willow flycatcher (*Empidonax traillii*), and Bell's vireo (RHJV 2000). A multi-species approach to riparian community restoration should be advocated.

Monitoring Needs

The Breeding Bird Survey is inadequate for monitoring changes in the population dynamics of this species as well as many of its riparian associates. The yellow-breasted chat is well-sampled by various other methods, such as off-road point counts and constant effort mist-netting (Ralph et al. 1993). Methods used should be standardized to ensure compatibility of data sets.

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